ANNUAL AND FINAL REPORT

ON

EL 25479

FOR THE PERIOD

26 JUNE 2011 TO 22 DECEMBER 2011

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February 2012

Distribution: NT Department of Resources
Element 92 Pty Ltd (Thundelarra Exploration Ltd)
EL 25479 is located about 185 km SE of Darwin and approximately 40 km NE of Pine Creek. It was granted to Atom Energy Limited on 26 June 2007 for a period of 6 years. It originally had three graticular blocks with an area of 10.05 km. Two blocks were surrendered in subsequent years. On 3 January 2010, Thundelarra Exploration Limited and Element 92 Pty Ltd entered into an optional agreement with the tenement holder. By the virtue of this agreement, Thundelarra/Element 92 secured the rights to explore the tenement and also to purchase 100% interest in the tenement. However, on 22 December companies involved in the JV decided to surrender the tenement due to low potential for commodities being sought.

The tenement is situated in the central part of the Pine Creek Orogen and comprises lithologies of the Palaeoproterozoic Burrell Creek Formation and Mt Bonnie Formation which are exposed in the northern corner of the EL. These meta-sedimentary sequences have been intruded by the McCarthy's Granite. It may be noted that more than 95% of the tenement area is underlain by the McCarthy’s Granite.

During the term of the EL 25479, project area was investigated for the presence of uranium, gold and base metals mineralisation. For this purpose, all open file data which included historical openfile reports, geophysical and geochemical data. In addition a number of field visits were undertaken for ground truthing and ground radiometric survey. During the term of the licence, a through review of the geological and geophysical data of the project area was undertaken. Appraisal of project area did not reveal any significant potential for mineral commodities of interest, and as a result of that EL 25479 was surrendered on 22 December 2011.
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1.0 INTRODUCTION

Exploration Licence (EL) 25479 is located about 40 km east of Pine Creek, Northern Territory (Figure 1). Element 92 Pty Limited acquired this EL from Atom Energy Limited/Excelsior Gold Limited to explore for uranium, gold and base metals. It is being managed by Thundelarra Exploration Limited under Atom JV. This is the annual and final report on the project area.

2.0 LOCATION AND ACCESS

The tenement is located about 185 km SE of Darwin and approximately 40 km NE of Pine Creek (Figure 1). Access by road from Darwin is via the Stuart Highway to Pine Creek, then 40 kilometres northeast along the Kakadu Highway. The tenement may then be accessed by a track to the south of the McCarthy’s Mine. Vehicle access within the tenement is possible by station tracks which may be impassable during wet season.

3.0 TENEMENT DETAILS

EL 25479 was granted to Atom Energy Limited on 26 June 2007 for a period of 6 years. It originally had three graticular blocks with an area of 10.05 km. Two blocks were surrendered in subsequent years. On 3 January 2010, Thundelarra Exploration Limited and Element 92 Pty Ltd entered into an optional agreement with the tenement holder. By the virtue of this agreement, Thundelarra/Element 92 secured the rights to explore the tenement and also to purchase 100% interest subsequently. However, on 22 December 2011, companies involved in the JV decided to surrender the tenement due to low potential for commodities being sought. In previous years, EL 25479 has been reported as part of Allamber Project (GR 201-11)

4.0 GEOLOGICAL SETTING

EL 25479 is situated within the central part of the Pine Creek Orogen (PCO), which is a tightly folded sequence of Palaeoproterozoic rocks, 10 to 14 km in thickness, laid down on a rifted granitic Archaean basement during the interval ~2.2-1.87Ga. The sequence is dominated by pelitic and psammitic (continental shelf shallow marine) sediments with minor inter-layered tuff units. Pre-orogenic mafic sills of the Zamu Dolerite intruded the sequence prior to regional metamorphism and deformation.
Figure 1: Location of the project area
During the Top End Orogeny (1870 – 1780 Ma), the sequence was tightly folded and pervasively altered with metamorphic grade averaging greenschist facies to phyllite. The Cullen intrusive event introduced a suite of fractionated calc-alkaline granitic magma into the sequence in the period ~1.85-1.78Ma. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet) amphibolite facies to more extensive biotite and andalusite hornfels facies.

Figure 2 shows geology of the project area where lithologies of the Palaeoproterozoic Burrell Creek Formation and Mt Bonnie Formation are exposed in the northern corner of the EL. These meta-sedimentary sequences have been intruded by the McCarthy’s Granite which is a member of the Cullen Batholith (Bajwah, 1994). It may be noted that more than 95% of the tenement area is underlain by the McCarthy’s Granite.

The Mount Bonnie Formation consists of a 700m thick sequence of interbedded slate, mudstone, phyllite, siltstone, feldspathic greywacke and minor tuffaceous chert, crystal tuff, argillite and rare banded iron formations and dolomite. It is host to a number of vein-type Au, base metal and Sn deposits. The banded iron formations host stratabound Au-Pb-Zn-Cu-Ag polymetallic deposits. The Burrell Creek Formation is the younger meta-sedimentary unit which crops in small area are in the northern corner of EL 25479. It mainly contains phyllite, slate, sandstone and siltstone and known to have gold and uranium mineralisation in the Pine Creek Orogen.

The McCarthy’s Granite is an irregular-shaped pluton occurring in the central part of eastern lobe of the Cullen Batholith. It mainly crops out as pavements or scattered boulders. Much of the pluton is covered by low-lying residual sandy soils. In places, granite body is covered by alluvium and lateritic masses.

**5.0 PREVIOUS EXPLORATION ACTIVITY**

A number of companies have explored, at various times, the area now covered by EL 25479 for base metals and uranium mineralisation. Most of the activity was undertaken around the silver-lead mineralisation from the McCarthy’s Hill Mine which lies immediately to the south-west of the tenement area. To the south-east, the focus of exploration was directed to the copper mineralisation around the Mt. Davis Granite.
Figure 2: Geological setting of the project area
6.0 EXPLORATION DURING THE TERM OF EL 25479

During the term of the EL, project area was investigated for the presence of uranium, gold and base metals mineralisation. For this purpose, all open file data which included historical open file reports, geophysical and geochemical data. In addition, a number of field visits were undertaken for ground-truthing and ground radiometric survey. During the term of the licence, a through review of the geological and geophysical data of the project area was undertaken in order to assess the mineral potential of the project area.

The project area underlies lithologies of the Palaeoproterozoic Burrell Creek Formation and Mt Bonnie Formation are exposed in the northern corner of the EL. These meta-sedimentary sequences have been intruded by the McCarthy’s Granite which is a member of the Cullen Batholith. It may be noted that more than 95% of the tenement area is underlain by the McCarthy’s Granite. The Burrell Creek Formation and Mt Bonnie Formation are known to have potential for gold, base metals and uranium mineralisation, especially due to the presence of the McCarthy’s Granite in the southern part of the EL. The McCarthy’s Granite intrudes the Palaeoproterozoic strata towards north which indicated that during contact/thermal metamorphism, metalliferous fluids might have been generated which could have been responsible for mineralisation.

Open file geophysical data were obtained from the Northern Territory Geological and re-processed. Figure 3 shows total counts (radiometric) image of the project area where enhanced radioactivity can be seen within the project area, which may have been generated by the accumulation of black organic soil within the project area. To compliment this study, a number of field visits were undertaken during 2009-10 reporting period for ground-truthing (Vieru, 2010). On ground radiometric survey did not reveal any significant radiometric anomaly. As a result of that uranium potential of EL 25479 was down-graded.

Figure 4 shows the TMI image of the project area and surroundings. Contact zone between the Allamber Springs Granite and meta-sediments is well marked, but it did not show any significant magnetic anomaly which can be pursued further. As a result of that tenement holder decided to surrender EL 25479.

Other activities during the reporting period included tenement administration, report writing and decision to surrender the tenement due to lack of mineral potential of the project area.

During the reporting period, a total of $14311.00 expended and details are given in Appendix 1 at the end of report.
Figure 3: Uranium image of EL 25479
Figure 4: TMI image of EL 25479
7.0 REFERENCES

Bajwah, Z.U. 1994. A contribution of geology, petrology and geochemistry to the Cullen Batholith
and related hydrothermal activity responsible for mineralisation, Pine Creek Geosyncline,

Taylor, N., and Hamlyn, D., 2009., EL 25478 “Cleo’s Regional 5 Prospect” Annual Report for the
period 26 June 2008 to 25 June 2009. Atomic Energy Limited Annual Report to NT Dept of
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Thundelarra Exploration Limited Annual Report to NT Dept of Resources.

Appendix 1: Mineral exploration expenditure – EL 25479